WILDLIFE DISEASE

(Prepared by the Secretariat)

Summary:

This document provides a summary of work related to wildlife disease under CMS following COP13. In line with the recommendations of the 6th meeting of the Sessional Committee of the Scientific Council (2023), the document proposes draft amendments to Resolution 12.6 Wildlife Disease and Migratory Species. The Secretariat proposes moving the text related to Avian Influenza from Resolution 12.6, which covers wildlife health issues in general, to a new specific resolution on Avian Influenza. Draft Decisions are also proposed.

The summary of the report Migratory Species and Health: A Review of Migration and Wildlife Disease Dynamics, and the Health of Migratory Species, within the Context of One Health is contained in Annex 1 of this document, while the full review is provided in document UNEP/CMS/COP14/Inf.30.4.3.
WILDLIFE DISEASE

Background

1. CMS has worked on wildlife disease since COP8 in 2005, defining mandates and areas of competence of the Convention in this area through a series of Resolutions and Decisions, and developing mechanisms to deliver those mandates. These are consolidated in Resolution 12.6 Wildlife Disease and Migratory Species. The Resolution recognizes the role of CMS and its Scientific Council in providing practical recommendations and guidance on the nature and extent of risks associated with diseases and migratory species, and on action to tackle those risks.

2. The COVID-19 pandemic increased the world’s attention on zoonotic diseases – illnesses that can spread between animals and people. While much of the focus has been on the risks they pose to human health, there is also greater awareness of the potential spread of infectious diseases from humans to wildlife and between species.

3. The current spread of highly pathogenic avian influenza (HPAI) in the northern hemisphere, Africa, the Atlantic and Pacific Oceans, South America and, most recently, in Antarctica, represents a global risk for not only wild birds and avian livestock, but also to mammals infected through consumption of infected birds or carcasses. Although the virus predominantly spreads among birds, the World Health Organization (WHO) has noted that, while the number of cases in humans is extremely rare, the increasing number of detections of the current H5N1 strain among mammals raises concerns that the virus might adapt to infect humans more easily.

4. It is important to better understand the links between wildlife diseases, including zoonotic diseases, and the exploitation of wildlife and habitat destruction and fragmentation. The same human activities that are causing increased risk of both infectious and non-infectious wildlife diseases are also major factors in the decline of wild species of animals, including migratory species. These include the exploitation of wild species for a variety of purposes – as a source of food or income; use of animal parts for other commercial purposes; recreational hunting; and belief-based practices – and the destruction of natural habitat and encroachment of activities that bring humans and their livestock into close proximity with wild species.

5. The unique role of CMS in addressing the impact of wildlife disease on migratory species has led to the creation of a number of institutional and technical mechanisms. In 2005, the CMS and AEWA Secretariats established the Scientific Task Force on Avian Influenza and Wild Birds. The Task Force, convened by FAO and the CMS Secretariat, aims to bring together information on the root causes of avian influenza and scientific advice on the conservation impact of the disease, as well as on technical measures to combat it and to develop early warning systems.

6. In 2011, the CMS Secretariat and FAO co-convened the Scientific Task Force on Wildlife and Ecosystem Health. The Task Force aimed to share scientific information and raise awareness on prioritized diseases and biodiversity and ecosystem health concerns to support decision-making processes in the context of relevant multilateral environmental agreements. This Task Force is currently not in operation, but the aim is to include its mandate in the Scientific Council’s newly-established Working Group on Migratory Species and Health (see paragraph 8).
7. In 2007, the CMS Scientific Council established the Working Group on Migratory Species as Vectors of Diseases, with the aim of making recommendations regarding the nature and extent of risks associated with diseases other than avian influenza in migratory species and possible actions that Parties can take to address these.

8. As pressures on migratory species and their habitats are expected to continue growing over the coming decades, with potential effects on migratory behaviour, the 5th meeting of the Sessional Committee of the Scientific Council (ScC-SC5, 2021) agreed that the Working Group on Migratory Species as Vectors of Diseases provided an appropriate mechanism to increase attention to these issues. However, ScC-SC5 acknowledged that the Working Group would need to be reactivated with a renewed membership and mandate. The Scientific Council renamed it the Working Group on Migratory Species and Health. With the renewed mandate, it aims to provide a platform for CMS work and involvement in issues related to migratory species and health (Terms of reference of the Working Group can be found in UNEP/CMS/ScC-SC5/Outcome 11).

9. A review of wildlife disease dynamics in relation to migration and the health of migratory species was included in the Programme of Work for the Sessional Committee of the Scientific Council for the intersessional period between COP13 and COP14, to assist the Working Group in developing and prioritizing work and contributing to the One Health High-Level Expert Group – which comprises UNEP, WHO, FAO and the World Organization for Animal Health (WOAH) – and other relevant initiatives.

10. In response to the Secretariat's efforts to raise funds to support the production of the review, voluntary contributions were provided by the Governments of Germany and the United Kingdom. In April 2023, the Secretariat, in close consultation with the COP-appointed Councillor for Wildlife Health, Dr. Ruth Cromie, commissioned the University of Edinburgh to produce the review.

11. The report comprises three main sections:

   - A ‘One Health and ecosystem health’ section summarizing the context of health in relation to conservation; the interdependence of health across sectors; and the need for One Health and ecosystem approaches to health and its management;
   - A ‘migration and disease dynamics’ section, which discusses disease in relation to migration and the potential impacts of migration, and its disruption, on the health of wildlife, domestic animals and humans (i.e., zoonotic risks);
   - A ‘key health issues for migratory species’ section reviewing key health issues affecting migratory species, with an emphasis on known issues for CMS-listed species.

12. The advanced draft of the full report and the summary of the review were presented to ScC-SC6 as documents UNEP/CMS/ScC-SC6/Inf.12.4.3 and Annex to UNEP/CMS/ScC-SC6/Doc.12.4.3, respectively. The Scientific Council welcomed the review, and requested the Secretariat to finalize the report.

Discussion and analysis

13. The ScC-SC6 also requested the Secretariat to prepare a document for consideration by COP14 containing draft Decisions and a draft amended Resolution 12.6 Wildlife Disease and Migratory Species, taking into account, as appropriate, the following elements:
i. Encourage Parties to take note of the Migratory Species and Health Review and implement its key recommendations;

ii. Request the Scientific Council to provide any recommendations on issues related to migratory species and health, as appropriate, to COP15, noting the establishment of the CMS Scientific Council Working Group on Migratory Species and Health (Terms of reference are contained in the document UNEP/CMS/ScC-SC5/Outcome 11);

iii. Encourage the Secretariat and Parties to engage with WHO in developing a new instrument on pandemic prevention, preparedness and response.

14. Based on the guidance from ScC-SC6, the Secretariat reviewed the text of Resolution 12.6 and is proposing amendments for consideration by COP14. The Secretariat also proposes splitting the Resolution into two: amended Resolution 12.6 *Wildlife Disease and Migratory Species*, set forth in Annex 2 of this document; and a new Resolution 14.AA *Avian Influenza*, contained in Annex 3. Resolution 12.6 would address general wildlife health issues, including zoonotic diseases, while the specific issue of avian influenza would be addressed separately in Resolution 14.AA.

15. The Secretariat also proposed draft Decisions for consideration by COP14, as contained in Annex 4 to this document.

16. Finally, a summary of the review of migration and wildlife disease dynamics and the health of migratory species, produced by the University of Edinburgh, is contained in Annex 1 of this document, while the full review is presented in document UNEP/CMS/COP14/Inf.30.4.3.

**Recommended actions**

13. The Conference of the Parties is recommended to:

   a) take note of the summary of the *Migratory Species and Health: A Review of Migration and Wildlife Disease Dynamics, and the Health of Migratory Species, within the Context of One Health*, contained in Annex 1 of this document, and the full review in UNEP/CMS/COP14/Inf.30.4.3;

   b) adopt the draft amendments to Resolution 12.6 *Wildlife Disease and Migratory Species*, as contained in Annex 2 of this document;

   c) adopt the draft Resolution *Avian Influenza*, as contained in Annex 3 of this document;

   d) adopt the draft Decisions, as contained in Annex 4 of this document.
MIGRATORY SPECIES AND HEALTH:
A REVIEW OF MIGRATION AND WILDLIFE DISEASE DYNAMICS, AND THE HEALTH
OF MIGRATORY SPECIES, WITHIN THE CONTEXT OF ONE HEALTH

SUMMARY DOCUMENT

Prepared for: The Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Authors: Marja Kipperman, Katie Beckmann, Neil Anderson, Anna Meredith (Royal (Dick) School of Veterinary Studies, University of Edinburgh, UK) and Ruth Cromie (CMS COP-appointed Councillor for Wildlife Health).

NB: Due to its length, the full review is presented as a separate file here.
KEY MESSAGES

1. **Key concepts**

*Preventative One Health approaches are needed to address the risks to migratory species from infectious and non-infectious diseases.*

1.1. Migratory species can be affected by infectious and non-infectious diseases. These can have serious implications for their health and survival, as well as associated impacts on livestock and human health.

1.2. The environment is the setting and determinant for health across wildlife, domestic animal and human sectors: intact and well-managed ecosystems positively influence health.

1.3. The health of wildlife, livestock, companion animals, humans and their ecosystems are interdependent – for example, many pathogens (disease-causing infectious agents) are able to infect multiple species.

1.4. Disease is often viewed as a matter of survival or death when, in fact, its effects can be far more subtle. Disease may negatively affect reproductive success, development, host behaviour and the ability to compete for resources or to evade predation. It may also increase susceptibility to other infectious agents or disease conditions, which can consequently influence population status and resilience.

1.5. Disease can negatively affect the conservation status of migratory species, especially when populations are small and fragmented.

1.6. Infectious disease is a conservation concern for a diverse range of threatened migratory species. Highly pathogenic avian influenza (HPAI) poses a particular threat to many migratory avian species, while a range of infectious diseases are important in other taxa. Alongside infectious threats, toxins, pollutants and incidental anthropogenic trauma commonly compromise the health of migratory species.

1.7. Controlling disease once it has emerged can be very challenging due to the complexity of many wildlife diseases and the ecological context within which they operate. Hence, preventative approaches to health management, in effect working ‘upstream’, are more cost-effective than addressing human, animal and ecosystem health problems once they occur.

1.8. The One Health approach aims to sustainably balance and optimize the health of people, wild and domestic animals, and ecosystems. It has become an established, integrated and unifying approach to health, including to address emerging infectious diseases, and is endorsed by multiple national and international organizations and intergovernmental agreements.

2. **Human-driven changes in ecosystems and the impacts on health and disease**

*Drivers of population decline are responsible for disease emergence in wildlife, livestock and people, which is exacerbating threats to migratory species.*

2.1. The usual drivers of population decline are also the drivers of disease emergence. This can then exacerbate the susceptibility of migratory species to pre-existing threats.

2.2. Disease emergence is influenced by multiple factors, which can be synergistic or cumulative in their contribution to ill-health. These include socioeconomic conditions, the sustainability of agricultural practices, and changes in land use and climate. Human-driven changes to ecosystems are increasing disease risks and escalating
negative impacts on the health of humans and animals. Disease emergence is driven by, for example, the processes of landscape fragmentation, land-use change, unsustainable agricultural or aquacultural practice, overexploitation, invasive non-native species, pollution, climate change and other types of ecosystem disruption and ecosystem service loss. These problems, in turn, are the consequences of unsustainable pressures on resources.

2.3. Climate change is affecting the health of migratory species in multiple ways. Climate-induced changes in habitat and land use are altering environmental conditions for hosts, infectious agents and their invertebrate vectors (which are particularly sensitive to changes in temperature), with unpredictable consequences for the emergence of disease, including in new geographic locations.

2.4. Non-infectious disease conditions are also increasingly having negative effects on migratory species. For example, ill-health can be caused by pervasive toxic pollutants such as plastics, poisons, and chemical and organic pollution; human-induced injury; undernourishment; and stress from environmental disruption. In turn, these problems can reduce the resilience of wildlife populations to other diseases.

3. Interfaces and infectious diseases

*Human activities that create interfaces between wildlife, livestock or people generate infectious disease risks, with particular zoonotic risks originating from intensive production systems.*

3.1. Livestock-wildlife interfaces are areas of direct or indirect contact between livestock and wildlife, which are increased through, for example, agricultural development and expansion into wild areas. They are particularly problematic for transmission and spillover and spillback of infectious agents between species. Whatever the original source of the pathogen, livestock are a common source of zoonotic pathogens for people.

3.2. However, pastoral systems with resilient adaptive breeds of livestock can be well-integrated within natural systems; these may share pathogens with wildlife without causing or suffering much harm.

3.3. Emerging zoonoses originating from wildlife, including those with potential human pandemic risk, typically stem from a change in human activity or unusual interactions with wildlife; livestock frequently act as intermediate host species, and transmission may also occur via invertebrate vectors.

3.4. Some live animal market systems have been shown to increase risks of pathogen transfer between hosts and can also act as drivers of pathogen change, increasing the likelihood of transmission between species, including to humans.

3.5. Especially when unregulated, trade in wildlife (both live animals and animal products) risks creating regional and international movements of pathogens, which can then lead to emergence of infectious diseases in wildlife, domestic animals and/or humans.

3.6. Intensive domestic animal farming and some other high-risk farming methods can act as sites where pathogens (from whatever source) may be amplified to epidemic proportions and/or transformed (e.g., by mutation, re-assortment or recombination) into more virulent or transmissible variants. These pathogens may subsequently spill

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1 Spillover: transmission of an infectious agent from a host population or community where its prevalence may be relatively high, to a new host, usually crossing a species barrier.
2 Spillback: transmission of an infectious agent in the reverse direction from that of the above.
3 Zoonosis: an infection transmissible between humans and animals; ‘zoonotic’ is the adjective.
over into wildlife and/or humans causing high mortality, sometimes with subsequent spillback of these pathogens into livestock.

4. Disease dynamics in relation to migration and migratory species

Migration can act as a strategy for improving wildlife health but may also result in long-distance transmission of pathogens, especially following contact with livestock.

4.1. Migratory species are essential components of well-functioning and resilient ecosystems. They provide a wide range of ecosystem services, from pollination and seed dispersal to multiple provisioning and regulatory services, and exceptional societal benefits.

4.2. The disease dynamics associated with migration and the physiological costs of migration are complex; the health outcomes for individuals and populations are situation dependent.

4.3. Although migration can create a potential risk of long-distance movement of pathogens, migration itself can be used as a strategy to reduce pathogen burdens. For example, migration can reduce the likelihood of infection within a population by, in effect, removing individuals too unfit to successfully migrate, and with them their genes for disease susceptibility.

4.4. Exposure of migrants to different habitats, and potentially different and diverse infectious agents, can build their resilience to infectious disease. Therefore, migration may serve to safeguard the health of wildlife, and, in turn, reduce the risk of infection transmission to domestic animals and people, depending on the local context.

4.5. Migratory species can host endemic, emerging or re-emerging infections, including those that have been transmitted from livestock. Consequently, migration can bring infectious agents to new areas and to naïve populations, including livestock, increasing the likelihood of disease.

4.6. Migratory species can be viewed as both the victims of disease and, at times, the vectors of infection. As a consequence of the latter, they can suffer indirectly if they are subject to inappropriate disease control measures (including lethal responses) or other consequences arising from negative public perceptions.

4.7. Migration can also increase the likelihood of a range of non-infectious health conditions as animals move through different habitats, or if migration patterns change in response to climate change. For example, migratory wild animals may suffer or die from anthropogenic traumatic injury; undernourishment; exposure to toxins or pollutants; or overexploitation.

4.8. Human activities are profoundly influencing migratory species. Changes in migration, along with the drivers of these changes, can not only have wide-ranging ecosystem and population-level effects, but also influence infection dynamics.

4.9. The effects of migratory change and disruption on infection dynamics are difficult to predict, and, as yet, there is a lack of real-world data on these relationships. Nevertheless, there is potential for increased pathogen burdens to compromise the health of migratory wild animals, and to negatively impact the health of domestic animals and people.
5. **Key health issues in migratory species**

*An expert consultation identified infectious and non-infectious disease issues in CMS-listed species and the importance of human drivers in their emergence.*

5.1. A pilot expert consultation was conducted as part of this review, with the aim of exploring disease issues in migratory species listed in CMS Appendices I and II.

5.2. Infectious disease was viewed as a ‘highly important’ conservation issue in a majority of species groups and was a particular concern in avian and terrestrial species (85% of groups).

5.3. While the role of wild birds as a reservoir and source of HPAI viruses in domestic species and humans is well recognized, importantly, this consultation highlighted that HPAI is a notable issue in a large, taxonomically diverse range of migratory avian species.

5.4. Other infectious diseases were considered highly important conservation concerns in terrestrial and aquatic species. These included anthrax, tuberculosis, rabies and mange in a range of terrestrial mammal species, and canine distemper in multiple marine mammal species.

5.5. Experts viewed the most prominent underlying drivers of priority infectious disease issues to be habitat loss, degradation or disturbance, climate change, and agriculture/aquaculture; the latter was considered a particularly important driver of HPAI. Frequently, multiple drivers were considered important.

5.6. Chemical toxicants, biological toxins, such as those produced by algal blooms, and pollutants were considered a highly important health issue, in particular for avian and aquatic migratory species (62% and 55% of species groups respectively).

5.7. Incidental anthropogenic trauma was also considered a highly important issue in a broad range of taxa, especially aquatic species (73% of aquatic species groups), which are commonly affected by bycatch and injury from or entanglement in marine debris.

5.8. There is a notable lack of knowledge about the infection and disease status of many migratory species. Even in better-studied species such as primates, there remains the potential for currently unknown or unrecognized pathogens to become a future threat.

6. **Knowledge gaps and shortcomings in national and institutional approaches to wildlife health**

*Lack of planning for and understanding of threats to wildlife health compromise preparedness.*

6.1. There remain significant gaps in national and organizational prevention, contingency and response planning for wildlife disease threats. Preparedness is compromised where countries lack functional wildlife health-related programmes and policies, and where there is a lack of institutional structures to protect human, agricultural or wildlife interests from endemic or introduced diseases.

6.2. Despite widespread acceptance of the value of One Health approaches, wildlife is often the 'poor relation'; inequity in decision-making about health can lead to poor health outcomes across the sectors.

6.3. Our understanding of the causes and epidemiology of wildlife disease is often poor, a situation exacerbated by limited surveillance, outbreak investigation and research. This reduces our ability to prepare for, prevent or mitigate disease risks across all sectors of wildlife, people and domestic animals.
6.4. A perception of wildlife disease as a matter for agriculture rather than wildlife conservation has meant that environment sections of government are often reluctant to lead on wildlife and ecosystem health issues, with potential negative health outcomes across sectors as a consequence.

6.5. There remains a clear need for improved global systems for wildlife disease reporting to aid preparedness and responses.
RECOMMENDATIONS

1. Tackling key drivers of disease emergence
   1.1 It is important to recognize the commonalities between the drivers of both migratory species population decline and disease emergence.
   1.2 As such, urgent enhanced actions are required to address the drivers of population decline, including through climate change mitigation and adaptation; reducing habitat loss, fragmentation and degradation; limiting pollution; reducing overexploitation; preventing the spread of invasive non-native species; and addressing high-risk agricultural and aquacultural practices. Addressing these drivers of disease emergence will reduce threats and pressures on wildlife and ecosystems, and is key to limiting ill-health and improving resilience to disease across sectors.

2. Enabling frameworks for health
   2.1 Implementation of the Sustainable Development Goals would significantly enhance the health of people, animals and the environment worldwide.
   2.2 One Health and ecosystem approaches appreciate the interconnectivity of health between wildlife, livestock and people, and are essential for maximizing health across sectors. However, One Health approaches can often be anthropocentric, with insufficient attention on promoting the health of wildlife. They should instead be used to promote equitable decision-making about health management, appreciating that promoting the health of wildlife reduces risks to humans and their interests as well as bringing conservation benefits.
   2.3 One Health approaches require multisectoral and transdisciplinary collaboration and appropriate organizational structures and communication. These approaches should be promoted and enhanced at the national level, along with cooperation at the international level, in order to prevent and respond to wildlife health threats.
   2.4 Preventative approaches are both cost-effective and necessary to safeguard health in migratory wildlife, domestic animals and people. They should be a key feature of any future pandemic instrument being negotiated under the auspices of WHO. The role of those involved in biodiversity conservation and sustainable livelihoods should therefore be recognized for and actively supported in their contribution to health across all sectors. The role of UNEP in the FAO UNEP WHO WOAH Quadripartite is warmly welcomed.

3. Managing interfaces and infectious diseases
   3.1 Livestock-wildlife interfaces created by, for example, agricultural development and expansion into wild areas, are particularly problematic for infectious agent transmission and emergence. There should be a focus on ensuring effective protection of well-connected natural habitat and minimizing fragmentation to reduce ‘edge effects’ where transmission of infections could occur.
   3.2 Every effort should be made to better manage livestock to reduce risks for the benefit of all. Measures include:
      a) Improving biosecurity, livestock vaccination, and better planning of both the location and nature of livestock management.
      b) Reassessing intensive livestock production that presents particular threats to human and wildlife health. For medium- and high-income countries, where choices can be made about protein sources, reducing consumption of animal
protein from these systems is desirable, both from an environmental and wildlife health perspective.

- Using resilient, adaptive local breeds of livestock that pose a lower risk in terms of pathogen spillover and spillback.

3.3 Robust efforts should be made to prevent additional sources of pathogen pollution/introduction to wildlife and their environment, always recognizing the value of robust risk assessments and preventative approaches. These sources include feral animals, traded plants and animals, non-native species and animals released for game, conservation or other purposes.

3.4 Efforts should be made to reduce or otherwise manage practices in live animal market systems that pose a high risk of pathogen transfer and are drivers of pathogen change.

4. **Tackling non-infectious disease**

4.1 In addition to tackling the overarching drivers of disease emergence, measures to minimize non-infectious causes of wildlife mortality include:

- Taking action to reduce and mitigate pollutants and poisons, particularly where regulatory restriction and/or enforcement is required to prevent release or use of pollutants and poisons at source.

- Mitigating human-induced injury of wildlife from infrastructure and other human developments and activities.

- Removing barriers to migration such as habitat fragmentation, or physical barriers that can result in death through undernourishment.

- Considering the effects of nutritional deficits and stressors in terms of resilience to other diseases when planning changes to land use or altering habitats.

5. **Improving institutional preparedness, planning and response**

5.1 Rather than seeing animal health as the sole responsibility of agriculture ministries, environment sections of government also need to fully engage in wildlife health and recognize their roles in promoting resilience of ecosystems and health outcomes across sectors, including in human pandemic prevention.

5.2 The development of national wildlife health strategies is encouraged, noting the important role they play in successful One Health approaches.

5.3 The health of migratory populations can be protected and fostered by strengthening wildlife health systems. These comprise the expertise, resources and organizational structures that enable effective planning, and disease surveillance, diagnosis and management. Building this capacity is relatively inexpensive compared with the potential costs associated with reactive management of disease outbreaks. These should be integrated with human and domestic animal health systems within a One Health framework.

5.4 Governments, their agencies, and all those with responsibility for managing wildlife are encouraged to carry out contingency planning during times without outbreaks (‘peacetime’), ensuring that all relevant stakeholders are involved. This will not only help prevent wildlife health problems occurring in the first place, but also facilitate swift and appropriate responses in emergency situations. It will also minimize the adverse impacts of disease outbreaks and guard against inappropriate control measures such as lethal responses.

5.5 Robust wildlife health surveillance, with conservation (in parallel to livestock protection) as a key goal, is required to support contingency planning, early warning
systems and risk assessments. Ecological and population monitoring should be integrated into surveillance systems so that the epidemiology and impacts of disease can be better understood.

5.6 Thorough investigations of outbreaks of wildlife disease are needed to help inform epidemiological understanding and assist in future disease planning to minimize impacts across health sectors.

5.7 Improvements are needed in wildlife diagnostics, including increased capacity in testing facilities. Additionally, it is important to prevent delays in diagnosis and research caused by regulatory limitations on transporting diagnostic and research specimens across national boundaries.

6. Filling knowledge gaps and prioritization

6.1 In line with Article II.3.a) of the Convention, Parties should promote, cooperate in and support research relating to migratory species in the context of disease.

6.2 Efforts should be made to address the significant gaps in our knowledge of the epidemiology and drivers of many diseases of migratory species.

6.3 Research and resourcing should be targeted at priority health threats to migratory species, and particularly to species with a poor conservation status.

7. Improving reporting and information-sharing

7.1 Global disease information and reporting systems for wildlife are essential for early warning as well as other aspects of disease control. These systems require further improvement to ensure rapid reporting and inclusion of contextual epidemiological and environmental information to better inform understanding of disease events and their conservation impacts.

7.2 Timely information and data sharing on wildlife health issues between nations is encouraged, to enable early warning and risk assessments for management decision-making.

8. Using information sources for wildlife health

8.1 Guidance on managing wildlife health and responding to diseases is available, and those with responsibilities for wildlife are encouraged to use it and adapt it for national and specific settings.
# ANNEX 2

## PROPOSED AMENDMENTS TO RESOLUTION 12.6

### WILDLIFE DISEASE AND MIGRATORY SPECIES

<table>
<thead>
<tr>
<th>Resolution 12.6</th>
<th>Proposed Amendments to Resolution 12.6</th>
<th>Clean Text of the Proposed Amended Resolution 12.6</th>
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<tr>
<td><strong>WILDLIFE DISEASE AND MIGRATORY SPECIES</strong></td>
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<td><strong>New text.</strong></td>
<td><em>Recalling</em> the work on wildlife disease that has been ongoing under the Convention since COP8.</td>
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<tr>
<td>Res.12.6, preambular para 1</td>
<td><em>Further Recalling</em> Resolutions 8.27, 9.8, and 10.22 on various aspects of wildlife disease, which have been repealed by COP12 and consolidated in Resolution 12.6 <em>Wildlife Disease and Migratory Species</em>.</td>
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<td>Acknowledging that wildlife health, livestock health, human health, and ecosystem health are interdependent and influenced by multiple factors, <em>inter alia</em>, socio-economics, sustainability of agriculture, demographics, climate and landscape changes,</td>
<td>Acknowledging that wildlife health, livestock and companion animal health, human health, and ecosystem health are interdependent and influenced by multiple factors, <em>inter alia</em>, including <em>socio-economics</em>, <em>socioeconomic factors</em>, the sustainability of agriculture, demographics, climate and landscape changes, and the fact that the environment is the setting (place and context) and determinant of potential resilience to disease.</td>
<td>Acknowledging that wildlife health, livestock and companion animal health, human health, and ecosystem health are interdependent and influenced by multiple factors including socioeconomic factors, the sustainability of agriculture, demographics, climate and landscape changes, and the fact that the environment is the setting (place and context) and determinant of potential resilience to disease.</td>
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<td>Res.12.6, preambular para 4</td>
<td><em>Aware</em> that <em>wildlife diseases</em> of wildlife are a normal cause of mortality and morbidity, <em>and yet conscious</em> that emerging or re-emerging diseases of <em>wildlife</em> can have serious implications for the status of migratory and non-migratory species, especially</td>
<td><em>Aware</em> that <em>wildlife diseases</em> are a normal cause of mortality and morbidity, <em>yet conscious</em> that emerging or re-emerging diseases in wildlife can have serious implications for the status of species, especially when populations are small and</td>
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In the tables of Annexes 2 and 3 the Secretariat presents an overview of the proposed amendments in the paragraphs which are proposed to be modified or added to the Resolution 12.6 *Wildlife Disease and Migratory Species*. The paragraphs of the Resolution that are not shown in the tables of Annexes 2 and 3 are proposed for deletion. These are: preambular paragraphs 23-25, 28-31, 34, 40, 43-47, 50-52, and operative paragraphs 1, 6-7, 10-11, 18-25, 28-34, 36 and 39 of the Resolution 12.6 *Wildlife Disease and Migratory Species*.
can have serious implications for the status of migratory and non-migratory species, especially when populations are small and fragmented, and that pressures on health can be synergistic or cumulative in their contribution to ill-health and poor reproductive success.

**New text.**

Acknowledging that wildlife disease conditions can be non-infectious as a result of, inter alia, pervasive toxic pollutants such as plastics, poisons, chemical and organic pollution, human-induced injury, undernourishment and stress from environmental disruption; and further recognizing the relationship between these and loss of resilience to other diseases within wildlife populations.

**New text.**

Further acknowledging that healthy, well-managed, resilient ecosystems positively influence health across sectors, and that preventative approaches to managing health are much more cost-effective than addressing health problems once they emerge.

**New text.**

Recalling UN General Assembly Resolution A/76/L.75 recognizing the right to a clean, healthy and sustainable environment as a human right,

Res.12.6, preambular para 5

Noting that the increased frequency of such diseases has been linked to processes of landscape fragmentation, unsustainable land-use choices, pollution and other types of ecosystem disruption, these being, in turn, the consequences of unsustainable pressure on resources as highlighted by the Millennium Ecosystem Assessment; […]

Concerned that, as supported by the analysis of diseases of concern in the CMS Review on Migratory Species and Health (UNEP/CMS/COP14/Inf.30.4.3), the increased frequency of such wildlife diseases has been linked to is driven by ecosystem disruption and ecosystem services loss, including processes of landscape fragmentation, unsustainable land-use choices, unsustainable agriculture and aquaculture practices, overexploitation, spread of invasive species, pollution and climate change, other types of ecosystem disruption, these being, in turn, the consequences of unsustainable pressure on resources as highlighted by the Millennium Ecosystem Assessment.
Res.12.6, preambular para 5

[...]; and further noting Recognizing the range of impacts that climate change is expected to result in has on wildlife health, inter alia, through changes in disease distribution and emergence due to altered physiological conditions for hosts and parasites, resulting in the spread of novel micro-organisms with unpredictable consequences or the re-emergence of pathogens in new geographic locations.

Res.12.6, preambular para 6

Noting also that domestic animals, feral and wild animals and humans share many pathogens, with wildlife sometimes being natural reservoirs of pathogens that can cause disease in domestic livestock, and that such pathogens have the potential significantly to affect both public health, food production, livelihoods and wider economies.

Res.12.6, preambular para 3

Noting also that domestic animals, feral and wild animals and humans share many pathogens, with wildlife sometimes being natural reservoirs of pathogens with the potential to affect both domestic animal and public health, increase pandemic risk, as well as to affect food production, livelihoods and wider economies.
**Understanding** the role that wildlife can play in emerging infectious diseases (EIDs) serving as either a reservoir host, temporary or periodic transmitter, or spillover/dead-end host.

*New text.*

*Further noting* that transmission of disease from wildlife is often related to changes in human activities and, while novel or unusual zoonotic pathogens of wildlife pose a pandemic or other risks to people, the source of the majority of zoonotic infections is from livestock and/or companion animals.

*New text.*

Aware that the dynamics of diseases relating to migration are complex and can have both positive and potentially negative effects on the health of the hosts and subsequent risks to domestic animals and people.

**Res.12.6, preambular para 7**

*Res.12.6, preambular para 9*

Recognizing that migratory species are victims and vectors of a range of contagious (e.g., viral, bacterial and fungal) diseases and some of these diseases may be transmitted to resident species, domestic stock, captive wild animals and humans. Some diseases have the potential to reduce biodiversity, especially in the case of threatened species.

Recognizing that in addition to migratory species being disease victims, they can also suffer indirect effects if they are recognized as disease vectors and can be subject to inappropriate disease control measures (including lethal responses) and consequences arising from negative public perceptions.
<table>
<thead>
<tr>
<th>Res.12.6, preambular para 11</th>
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<tbody>
<tr>
<td><strong>Acknowledging</strong> the substantial impacts of wildlife trade, both legal and illegal, on threatened and endangered species worldwide and the loss of biodiversity and food security that can result from the spread of pathogens through regional and international movements of animals and animal products,</td>
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<tr>
<th>Res.12.6, preambular para 12</th>
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<tbody>
<tr>
<td><strong>Further acknowledging</strong> the substantial risks for wildlife, livestock and people of the wildlife trade, both legal and illegal, which can result in the spread of pathogens to previously unexposed populations through regional and international movements of animals and animal products, and</td>
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<tr>
<td><strong>Acknowledging</strong> that some high-risk live animal markets have been shown to increase risks of pathogen transfer between hosts, can also act as drivers of pathogen change, increasing likelihood of transmission between species, including to humans,</td>
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<tr>
<th>Res.12.6, preambular para 10</th>
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<tr>
<td><strong>Recognizing</strong> the high risk of transmission of wildlife diseases from livestock and/or humans to wildlife and vice versa in areas of growing conflicts over land and increasing habitat loss, especially in developing countries,</td>
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<p>| Further recognizing that some intensive animal farming can act as sites where pathogens (from whatever source) may be amplified to epidemic proportions and/or transformed (e.g. by mutation, reassortment, or recombination) into more virulent and/or transmissible variants, and that these pathogens may subsequently spill over into wildlife (and/or humans) causing high mortality, sometimes with subsequent ‘spillback’ of these pathogens into livestock, and, as such, recognizing that the phasing out and prevention of such forms of animal |</p>
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<th>Pathogens may subsequently spill over into wildlife (and/or humans) causing high mortality, sometimes with subsequent ‘spillback’ of these pathogens into livestock, and, as such, recognizing that the phasing out and prevention of such forms of animal farming is highly desirable to achieve One Health objectives,</th>
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<tr>
<td><strong>Res.12.6, preambular para 49</strong></td>
<td><strong>Acknowledging</strong> that the One Health approach is increasingly gaining ground as a multidisciplinary way of addressing emerging infectious diseases, and that the concept has been endorsed by several international organizations including FAO, OIE, WHO, UNICEF and the World Bank,</td>
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<td><strong>Acknowledging</strong> that the One Health approach is increasingly gaining ground as a multidisciplinary way of addressing now established as an integrated, unifying approach that aims to sustainably balance and optimize the health of people, wild and domestic animals, and ecosystems, including how to address emerging infectious diseases, and that the concept has been endorsed by several—multiple international organizations including FAO, OIE, WHO, UNEP, IUCN, UNICEF and the World Bank; and <strong>further welcoming</strong> the large scope of consensus on appropriate approaches and responses to wildlife diseases which has developed among UN agencies, multilateral environmental agreements and other international organizations including OIE, reflected for example in decisions and resolutions of the Ramsar Convention, AEWA, CMS and in standards of the OIE,</td>
<td><strong>Acknowledging</strong> that the One Health approach is now established as an integrated, unifying approach that aims to sustainably balance and optimize the health of people, wild and domestic animals, and ecosystems, including how to address emerging infectious diseases, and that the concept has been endorsed by multiple international organizations including FAO, WOAH, WHO, UNEP, IUCN, UNICEF and the World Bank; and <strong>further welcoming</strong> the consensus on appropriate approaches and responses to wildlife diseases that have developed among UN agencies, multilateral environmental agreements and other international organizations, reflected, for example, in decisions and resolutions of the Ramsar Convention, AEWA and CMS,</td>
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<td><strong>Recognizing</strong> the key role of the environment in determining health and its importance to pandemic prevention,</td>
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<td><strong>Welcoming</strong> the joining of UNEP to the existing ‘health Tripartite’ of WHO, WOAH and FAO to form the Quadripartite and the development of the One Health Joint Plan of Action (2022-2026), as well as</td>
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1 Spillover: infectious agent, usually at relatively high prevalence, ‘spills’ (is transmitted) into a new host, usually crossing a species barrier.
the creation of the One Health High-Level Expert Panel (OHLEP); and further welcoming the 2022 Kunming-Montreal Global Biodiversity Framework from which One Health initiatives can emerge.

Res.12.6, preambular para 20
Welcoming the significant work of the Working Group on Wildlife Diseases of the World Organization for Animal Health (OIE) since its creation in 1994 and the recommendations and scientific publications derived from the Working Group on the surveillance and control of the most important specific wildlife diseases.

Further welcoming the significant work in the area of wildlife health by FAO, the Working Group on Wildlife Diseases of the WOAH, the IUCN Wildlife Health Specialist Group and Conservation Planning Specialist Group, UNEA, including its Resolution 5/6 Biodiversity and Health, and the work by multiple non-governmental agencies and organizations.

Res.12.6, preambular para 33
Recalling the outcomes of Ramsar COP 10 on the theme of ‘Healthy Wetlands, Healthy People’, which stressed the functional linkages between the role that wetlands play in providing ecosystem services for the support of both human and wildlife populations; and that aquatic waterbirds and other migratory species can be valuable indicators of ecosystem health.

Welcoming the body of work being undertaken by the Ramsar Scientific and Technical Review Panel on wetlands and health and promotion of an

Res.12.6, preambular para 41
Recalling the outcomes of Ramsar COP 10 on the theme of ‘Healthy Wetlands, Healthy People’, which stressed the functional linkages between the role that wetlands play in providing ecosystem services for the support of both human and wildlife populations; and that aquatic waterbirds and other migratory species can be valuable indicators of ecosystem health.

Welcoming the body of work being undertaken by the Ramsar Scientific and Technical Review Panel on wetlands and health and promotion of an
Welcoming the body of work being undertaken by the Ramsar Scientific and Technical Review Panel on wetlands and health and promotion of an ecosystem approach to dealing with health, in particular the Ramsar Disease Manual on Guidelines for Assessment, Monitoring and Management of Animal Disease in Wetlands which is aimed at practical disease guidance for wetland managers and policy makers,

| Welcoming the outcomes of Ramsar Convention work on the theme of ‘Healthy Wetlands, Healthy People’, including Resolution XI.12 *Wetlands and health: taking an ecosystem approach*, which stresses the functional role that wetlands play in providing ecosystem services that support the health of both human and wildlife populations; and further welcoming the guidance provided by the Ramsar Wetland Disease Manual, which provides practical disease guidance for habitat managers and policymakers. |

| New text. |

| Noting the work of the intergovernmental negotiating body, ‘The World Together’, to draft and negotiate a WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response. |

| Res.12.6, preambular para 35 |

| Aware also of the important work of the FAO and others with regard to domestic animal health and human health, but concerned that national and international responses to wildlife health have, in many situations, yet to be acknowledged as an essential element of disease surveillance or monitoring programmes, epidemiological investigations, and/or outbreak responses, |

| Noting, however, that despite the broad international and intersectoral recognition of the need to deal jointly with the health of humans, animals and ecosystems, the national planning for and responses to wildlife health have, in many situations, yet to be acknowledged as essential elements of disease prevention, preparedness, surveillance or monitoring programmes, epidemiological investigations, and/or outbreak responses by all sectors, |

| Res.12.6, preambular para 39 |

| Noting that existing methods of communication between the benefits of cross-sectoral organizational structures and communication |

| Noting the benefits of cross-sectoral organizational structures and communication involving health management authorities, health professionals, |
| Noting that existing methods of communication between management authorities, health professionals, biologists, veterinarians and natural resource professionals could be improved in some jurisdictions and are currently inadequate to respond to the complex issues surrounding human, animal and ecosystem health. | Involving health management authorities, health professionals, biologists, veterinarians and natural resource professionals for planning and responding to the complex issues surrounding human, animal and ecosystem health, |
| Res.12.6, preambular para 36 | Warmly welcoming the development of national wildlife disease strategies by some Contracting Parties and other governments; but also noting that many developing countries lack functional animal health-related programmes and strategies, policies and the infrastructure needed to protect human health, agricultural and wildlife interests from endemic or introduced diseases through local movements, re-establishment programmes, or international trade, |
| Welcoming the development of national wildlife disease strategies by some Contracting Parties and other governments; but also noting that many developing countries lack functional animal health-related programmes and strategies, policies and the infrastructure needed to protect human health, agricultural and wildlife interests from endemic or introduced diseases through local movements, re-establishment programmes, or international trade, | Warmly welcoming the development of national wildlife disease strategies by some Parties and other governments; while noting that many developing countries lack functional wildlife health-related programmes and strategies, policies and the infrastructure needed to protect human health, and agricultural and wildlife interests from endemic or introduced diseases, |
| Acknowledging the importance of the global disease information systems WAHIS and WAHIS-Wild developed by the OIE as well as its web interface WAHID, the FAO/OIE/WHO joint mechanism Global Early Warning and Response System for Major Animal Diseases (GLEWS) and existing information systems developed by organizations such as the IUCN Wildlife Health Specialist Group, the European Union, AU-IBAR in Africa, ASEAN in Asia, SPC in the Pacific Islands and OIRSA in Central America, | Acknowledging the importance of the global disease information systems coordinated between the OIE, FAO and WHO related to wildlife diseases, and the need to assure good communication and avoid unnecessary overlap in global reporting requirements, |
| Res.12.6, preambular para 26 | Acknowledging the importance of existing global disease information and intelligence systems, including those coordinated by the Quadripartite related to early warning, emerging infectious diseases and wildlife health, and the need for both urgency in reporting and inclusion of contextual epidemiological and environmental information, and to assure good communication and avoid unnecessary overlap in global reporting requirements, |
| Res.12.6, preambular para 48 | Acknowledging the importance of existing global disease information systems coordinated between the OIE, FAO and WHO related to wildlife diseases, and the need to assure good communication and avoid unnecessary overlap in global reporting requirements, |
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**Welcoming** the focus on wildlife disease by the CMS and establishment of the CMS Migratory Species and Health Working Group of the Scientific Council as a mechanism for further elaborating and coordinating the work of CMS on issues related to health of migratory species and how this is related to health in other sectors of domestic animal and human health including pandemic risk, and advising Parties accordingly,

**Further acknowledging** the valuable work of the CMS as it relates to wildlife health, inter alia, the Preventing Poisoning Working Group; the Intergovernmental Task Force on Phasing Out the Use of Lead Ammunition and Lead Fishing Weights; the Scientific Task Force on Avian Influenza and Wild Birds; the Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean; and the Asia-Pacific Illegal Taking of Migratory Birds Intergovernmental Task Force,

**Further welcoming** the Review of Migratory Species and Health (UNEP/CMS/COP14/Inf.30.4.3) funded by the Governments of Germany and the United Kingdom, undertaken by the University of Edinburgh, UK, to inform the work of the CMS Migratory Species and Health Working Group,

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2 Terms of Reference in document UNEP/CMS/ScC-SC5/Outcome 11
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<td><strong>Urges</strong> Parties to recognize the links between the drivers of population decline and disease emergence and urgently enhance actions to address the drivers of migratory species population decline by, inter alia, reducing habitat loss, fragmentation and degradation; addressing climate change mitigation and adaptation; preventing pollution; preventing the spread of invasive non-native species; and addressing high-risk agricultural and aquacultural practices;</td>
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<td>a) taking robust measures at livestock-wildlife interfaces, inter alia, those linked to agriculture and aquaculture and encroachment into wild areas, improving biosecurity, livestock vaccination and better planning and reassessment of intensive production where risks have been identified,</td>
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<td>b) endeavouring to prevent additional sources of pathogen pollution to wildlife and their environment from feral or otherwise released animals, from legally and illegally traded plants and animals, and from invasive non-native species, recognizing, at all times, the value of preventative approaches, and</td>
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<td>c) focusing efforts on reducing or otherwise managing those practices that are high risk for pathogen transfer and drivers for pathogen change;</td>
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<td>b) mitigating human-induced injury of wildlife (in infrastructure and other human developments and activities), and</td>
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<td>Requests Parties and others managing wildlife to develop strategies for prevention, preparedness and response to wildlife health threats by:</td>
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<td>7.</td>
<td>a. taking note of the CMS Migratory Species and Health Review (UNEP/CMS/COP14/Inf.30.4.3) and implementing its key recommendations where relevant; b. making proactive use of the substantial existing guidance provided by intergovernmental and other organizations on how to manage and respond to wildlife diseases and to share best practice guidelines and experience;</td>
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<td>Encourages Parties to address the significant knowledge gaps concerning the epidemiology and drivers of many diseases of migratory species that prevent good health management, and further encourages Parties to support research and resourcing targeted at priority health threats to migratory species, particularly those of unfavourable conservation status;</td>
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<td>Invites Parties to contribute voluntarily to the Wildlife Health Event Reporter (WHER) as an unofficial rapid reporting system for wildlife morbidity and mortality events in collaboration with OIE national delegates and wildlife focal points, taking fully into account the OIE WAHIS, FAO/OIE/WHO GLEWs mechanisms the joint</td>
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<td>Invites Parties to contribute voluntarily to rapid reporting systems for wildlife morbidity and mortality events in collaboration with WOAH national delegates and wildlife focal points, taking fully into account the WOAH World Animal Health Information System (WAHIS), the joint FAO–WOAH–WHO Global Early Warning System for health threats and emerging risks at the human–</td>
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<td>Calls on Parties to collaborate with and share simultaneously information with OIE national delegates and wildlife focal points, OIE WAHIS, the IUCN Wildlife Health Specialist Group, FAO/OIE/WHO GLEWS mechanisms and existing regional information systems;</td>
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<td>Encourages the WHO to further work with the wildlife and environment sector on pandemic preparedness, and urges ongoing collaboration and coordination between intergovernmental bodies to further incorporate conservation and environmental considerations into existing mechanisms established through the Quadripartite organizations;</td>
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<td>Resolution and the work of the CMS Migratory Species and Health Working Group in the development and implementation of its Programme of Work to support CMS in addressing health concerns of migratory species and to contribute to One Health initiatives and pandemic prevention;</td>
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<td>16. Calls on Parties and international donor organizations to provide technical and financial support to assist developing countries in establishing appropriate systems of surveillance and control of wildlife diseases;</td>
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<td>Requests the Secretariat to provide support for the Migratory Species and Health Working Group in the development and implementation of its Programme of Work, and to promote cooperation with the Quadripartite, One Health High-Level Expert Panel and CITES.</td>
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CLEAN TEXT OF THE PROPOSED AMENDED RESOLUTION 12.6

WILDLIFE DISEASE AND MIGRATORY SPECIES

Recalling the work on wildlife disease that has been ongoing under the Convention since COP8,

Further recalling Resolutions 8.27, 9.8 and 10.22 on various aspects of wildlife disease, which have been repealed by COP12 and consolidated in Resolution 12.6 Wildlife Disease and Migratory Species,

Acknowledging that wildlife health, livestock and companion animal health, human health, and ecosystem health are interdependent and influenced by multiple factors including socioeconomic factors, the sustainability of agriculture, demographics, climate and landscape changes, and the fact that the environment is the setting (place and context) and determinant of potential resilience to disease,

Aware that wildlife diseases are a normal cause of mortality and morbidity, yet conscious that emerging or re-emerging diseases in wildlife can have serious implications for the status of species, especially when populations are small and fragmented, and that pressures on health can be synergistic or cumulative in their contribution to ill-health and poor reproductive success,

Acknowledging that wildlife disease conditions can be non-infectious as a result of, inter alia, pervasive toxic pollutants such as plastics, poisons, chemical and organic pollution, human-induced injury, undernourishment and stress from environmental disruption; and further recognizing the relationship between these and loss of resilience to other diseases within wildlife populations,

Further acknowledging that healthy, well-managed, resilient ecosystems positively influence health across sectors, and that preventative approaches to managing health are much more cost-effective than addressing health problems once they emerge,

Recalling UN General Assembly Resolution A/76/L.75 recognizing the right to a clean, healthy and sustainable environment as a human right,

Concerned that, as supported by the analysis of diseases of concern in the CMS Review on Migratory Species and Health (UNEP/CMS/COP14/Inf.30.4.3), the increased frequency of wildlife diseases is driven by ecosystem disruption and ecosystem services loss, including landscape fragmentation, unsustainable land-use choices, unsustainable agriculture and aquaculture practices, overexploitation, spread of invasive species, pollution and climate change,

Recognizing the range of impacts that climate change has on wildlife health, inter alia, through changes in habitat and altered physiological conditions for hosts and parasites, which can result in the spread of pathogens and invertebrate vectors in particular, with unpredictable consequences for the emergence of disease in new geographic locations,

Aware also that our understanding of the causes and epidemiology of wildlife diseases is often poor, a situation exacerbated by limited surveillance and research, undermining ability to reduce or mitigate disease risks across all sectors of wildlife, people and domestic animals,
Noting also that domestic, feral and wild animals and humans share many pathogens, with wildlife sometimes being natural reservoirs of pathogens with the potential to affect both domestic animal and public health, increase pandemic risk, as well as to affect food production, livelihoods and wider economies,

Further noting that transmission of disease from wildlife is often related to changes in human activities and, while novel or unusual zoonotic pathogens of wildlife pose a pandemic or other risks to people, the source of the majority of zoonotic infections is from livestock and/or companion animals,

Aware that the dynamics of diseases relating to migration are complex and can have both positive and potentially negative effects on the health of the hosts and subsequent risks to domestic animals and people,

Recognizing that in addition to migratory species being disease victims, they can also suffer indirect effects if they are recognized as disease vectors and can be subject to inappropriate disease control measures (including lethal responses) and consequences arising from negative public perceptions,

Acknowledging the substantial impacts wildlife trade, both legal and unregulated and unsustainable, can have on biodiversity, especially on threatened or endangered species, and on food security, and further acknowledging the risk posed by wildlife and pet trade and other regional and international movements of animals and animal products in spreading pathogens and causing emergence of infectious diseases in wildlife, domestic animals and/or humans, while, at the same time, welcoming the collaborative efforts of CITES and the World Organization for Animal Health (WOAH) to address risks from zoonotic pathogens,

Acknowledging that some high-risk live animal markets have been shown to increase risks of pathogen transfer between hosts, can also act as drivers of pathogen change, increasing likelihood of transmission between species, including to humans,

Further recognizing that some intensive animal farming can act as sites where pathogens (from whatever source) may be amplified to epidemic proportions and/or transformed (e.g. by mutation, reassortment or recombination) into more virulent and/or transmissible variants, and that these pathogens may subsequently spill over into wildlife (and/or humans) causing high mortality, sometimes with subsequent ‘spillback’ of these pathogens into livestock, and, as such, recognizing that the phasing out and prevention of such forms of animal farming is highly desirable to achieve One Health objectives,

Acknowledging that the One Health approach is now established as an integrated, unifying approach that aims to sustainably balance and optimize the health of people, wild and domestic animals, and ecosystems, including how to address emerging infectious diseases, and that the concept has been endorsed by multiple international organizations including FAO, WOAH, WHO, UNEP, IUCN, UNICEF and the World Bank; and further welcoming the consensus on appropriate approaches and responses to wildlife diseases that have developed among UN agencies, multilateral environmental agreements and other international organizations, reflected, for example, in decisions and resolutions of the Ramsar Convention, AEWA and CMS,

Recognizing the key role of the environment in determining health and its importance to pandemic prevention,

1 Spillover: infectious agent, usually at relatively high prevalence, ‘spills’ (is transmitted) into a new host, usually crossing a species barrier.
Welcoming the joining of UNEP to the existing ‘health Tripartite’ of WHO, WOAH and FAO to form the Quadripartite and the development of the One Health Joint Plan of Action (2022-2026), as well as the creation of the One Health High-Level Expert Panel (OHLEP); and further welcoming the 2022 Kunming-Montreal Global Biodiversity Framework from which One Health initiatives can emerge,

Further welcoming the significant work in the area of wildlife health by FAO, the Working Group on Wildlife Diseases of the WOAH, the IUCN Wildlife Health Specialist Group and Conservation Planning Specialist Group, UNEA, including its Resolution 5/6 Biodiversity and Health, and the work by multiple non-governmental agencies and organizations,

Welcoming the outcomes of Ramsar Convention work on the theme of ‘Healthy Wetlands, Healthy People’, including Resolution XI.12 Wetlands and health: taking an ecosystem approach, which stresses the functional role that wetlands play in providing ecosystem services that support the health of both human and wildlife populations; and further welcoming the guidance provided by the Ramsar Wetland Disease Manual, which provides practical disease guidance for habitat managers and policymakers,

Noting the work of the intergovernmental negotiating body, ‘The World Together’, to draft and negotiate a WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response,

Noting, however, that despite the broad international and intersectoral recognition of the need to deal jointly with the health of humans, animals and ecosystems, the national planning for and responses to wildlife health have, in many situations, yet to be acknowledged as essential elements of disease prevention, preparedness, surveillance or monitoring programmes, epidemiological investigations, and/or outbreak responses by all sectors,

Noting the benefits of cross-sectoral organizational structures and communication involving health management authorities, health professionals, biologists, veterinarians and natural resource professionals for planning and responding to the complex issues surrounding human, animal and ecosystem health,

Warmly welcoming the development of national wildlife health strategies by some Parties and other governments; while noting that many developing countries lack functional wildlife health-related programmes and strategies, policies and the infrastructure needed to protect human health, and agricultural and wildlife interests from endemic or introduced diseases,

Acknowledging the importance of existing global disease information and intelligence systems, including those coordinated by the Quadripartite related to early warning, emerging infectious diseases and wildlife health, and the need for both urgency in reporting and inclusion of contextual epidemiological and environmental information, and to assure good communication and avoid unnecessary overlap in global reporting requirements,

Welcoming the focus on wildlife disease by the CMS and establishment of the CMS Migratory Species and Health Working Group2 of the Scientific Council as a mechanism for further elaborating and coordinating the work of CMS on issues related to health of migratory species and how this is related to health in other sectors of domestic animal and human health including pandemic risk, and advising Parties accordingly,

Further acknowledging the valuable work of the CMS as it relates to wildlife health, inter alia, the Preventing Poisoning Working Group; the Intergovernmental Task Force on Phasing Out the Use of Lead Ammunition and Lead Fishing Weights; the Scientific Task Force on Avian

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2 Terms of Reference in document UNEP/CMS/ScC-SC5/Outcome 11
Influenza and Wild Birds; the Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean; and the Asia-Pacific Illegal Taking of Migratory Birds Intergovernmental Task Force,

Further welcoming the Review of Migratory Species and Health (UNEP/CMS/COP14/Inf.30.4.3) funded by the Governments of Germany and the United Kingdom, undertaken by the University of Edinburgh, UK, to inform the work of the CMS Migratory Species and Health Working Group,

The Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals

Tackling drivers of health problems

1. Urges Parties to recognize the links between the drivers of population decline and disease emergence, and urgently enhance actions to address the drivers of migratory species population decline by, inter alia, reducing habitat loss, fragmentation and degradation; addressing climate change mitigation and adaptation; preventing pollution; preventing the spread of invasive non-native species; and addressing high-risk agricultural and aquacultural practices;

2. Urges Parties and others to minimize infectious disease risks to wildlife by:
   a) taking robust measures at livestock-wildlife interfaces, inter alia, those linked to agriculture and aquaculture and encroachment into wild areas, improving biosecurity, livestock vaccination and better planning and reassessment of intensive production where risks have been identified,
   b) endeavouring to prevent additional sources of pathogen pollution to wildlife and their environment from feral or otherwise released animals, from legally and illegally traded plants and animals, and from invasive non-native species, recognizing, at all times, the value of preventative approaches, and
   c) focusing efforts on reducing or otherwise managing those practices that are high risk for pathogen transfer and drivers for pathogen change;

3. Encourages Parties and others to minimize non-infectious causes of wildlife mortality by, inter alia:
   a) taking action to reduce and mitigate pollutants and poisons, particularly where regulatory restriction and/or enforcement is required,
   b) mitigating human-induced injury of wildlife (in infrastructure and other human developments and activities), and
   c) considering the effects of nutritional deficits and stressors in terms of resilience to other diseases when planning changes to land use or altering habitats;

Enabling frameworks for health

4. Requests Parties to take One Health and ecosystem approaches that recognize the interconnection between people, animals, plants and their shared environment, ensuring equitable decision-making between the sectors and a unified approach to health management;
5. **Encourages** Parties to promote and enhance multisectoral and transdisciplinary collaboration at the national level, and cooperation at the international level, in order to prevent and respond to wildlife health threats;

**Solutions for tackling health problems**

6. **Requests** Parties and others managing wildlife to develop strategies for prevention, preparedness and response to wildlife health threats by:
   a) developing wildlife health strategies with contingency and emergency response plans, with input from all relevant stakeholders, thus ensuring prevention of problems and appropriate responses in emergency situations;
   b) strengthening and supporting wildlife health systems to support wildlife health strategies by bringing together expertise, resources and organizational structures that enable, inter alia, effective early warning systems and risk assessment;
   c) strengthening and supporting wildlife health surveillance, with biodiversity conservation as a goal, and integrating ecological and population monitoring into surveillance systems;
   d) encouraging and supporting outbreak investigations, improvements in wildlife diagnostics, testing facilities and reporting systems, and data- and information-sharing, while additionally preventing delays in diagnosis and research caused by regulatory limits on transporting specimens across national boundaries;

**Information sources for tackling health problems**

7. **Encourages** Parties to inform their planning for wildlife health by:
   a) taking note of the CMS Migratory Species and Health Review (UNEP/CMS/COP14/Inf.30.4.3) and implementing its key recommendations where relevant;
   b) making proactive use of the substantial existing guidance provided by intergovernmental and other organizations on how to manage and respond to wildlife diseases and to share best practice guidelines and experience;

**Knowledge gaps and prioritization**

8. **Encourages** Parties to address the significant knowledge gaps concerning the epidemiology and drivers of many diseases of migratory species that prevent good health management, and **further encourages** Parties to support research and resourcing targeted at priority health threats to migratory species, particularly those of unfavourable conservation status;

**Cooperation**

9. **Invites** Parties to contribute voluntarily to rapid reporting systems for wildlife morbidity and mortality events in collaboration with WOAH national delegates and wildlife focal points, taking fully into account the WOAH World Animal Health Information System (WAHIS), the joint FAO–WOAH–WHO Global Early Warning System for health threats and emerging risks at the human–animal–ecosystems interface (GLEWS+), and existing regional information systems, and the need to complement existing communication channels, specifically WOAH disease reporting and ProMed-mail;
10. **Calls on** Parties to collaborate with and share information simultaneously with WOAH national delegates and wildlife focal points, WOAH WAHIS, the IUCN Wildlife Health Specialist Group, the joint FAO–WOAH–WHO GLEWS and existing regional information systems;

11. **Encourages** Parties and non-governmental organizations to work with the Quadripartite to: assess response and capacity development needs; evaluate resources needed to deliver these; and work collectively with the donor community to provide the necessary resources;

12. **Urges** the Secretariat and Parties to engage with the WHO intergovernmental negotiating body to ensure that One Health approaches are reflected in the WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response under negotiation;

13. **Encourages** the WHO to further work with the wildlife and environment sector on pandemic preparedness, and urges ongoing collaboration and coordination between intergovernmental bodies to further incorporate conservation and environmental considerations into existing mechanisms established through the Quadripartite organizations;

**Funding needs**

14. **Requests** Parties and international donor organizations to support the implementation of this Resolution and the work of the CMS Migratory Species and Health Working Group in the development and implementation of its Programme of Work to support CMS in addressing health concerns of migratory species and to contribute to One Health initiatives and pandemic prevention;

15. **Calls on** Parties and international donor organizations to provide technical and financial support to assist low- and middle-income countries in establishing appropriate pathogen and disease surveillance in wildlife populations, and management and control of wildlife diseases, including outbreak management;

**CMS engagement**

16. **Requests** the Secretariat to provide support for the Migratory Species and Health Working Group in the development and implementation of its Programme of Work, and to promote cooperation with the Quadripartite, One Health High-Level Expert Panel and CITES.
**ANNEX 3**

**PROPOSED NEW RESOLUTION**

**AVIAN INFLUENZA**

*NB: Proposed new text is underlined. Text to be deleted is crossed out.*

<table>
<thead>
<tr>
<th>Current Resolution 12.6 Wildlife Disease and Migratory Species</th>
<th>Proposed Amendments to Resolution 12.6 Wildlife Disease and Migratory Species</th>
<th>Clean text of proposed new Resolution Avian Influenza</th>
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<tbody>
<tr>
<td><strong>WILDLIFE DISEASE AND MIGRATORY SPECIES</strong></td>
<td><strong>WILDLIFE DISEASE AND MIGRATORY SPECIES</strong>&lt;br&gt;AVIAN INFLUENZA</td>
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<tr>
<td>New text.</td>
<td>Noting the significant work under CMS on avian influenza,</td>
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<tr>
<td>New text.</td>
<td>Recalling Resolution 12.6 Wildlife Disease and Migratory Species, and the resolutions on wildlife disease and avian influenza which were consolidated into it and repealed by COP12: Resolution 8.27 Migratory Species and Highly Pathogenic Avian Influenza, Resolution 9.8 Responding to the Challenge of Emerging and Re-emerging Diseases in Migratory Species, including Highly Pathogenic Avian Influenza H5N1, and Resolution 10.22 Wildlife Disease and Migratory Species,</td>
<td>Recalling Resolution 12.6 Wildlife Disease and Migratory Species, and the resolutions on wildlife disease and avian influenza which were consolidated into it and repealed by COP12: Resolution 8.27 Migratory Species and Highly Pathogenic Avian Influenza, Resolution 9.8 Responding to the Challenge of Emerging and Re-emerging Diseases in Migratory Species, including Highly Pathogenic Avian Influenza H5N1, and Resolution 10.22 Wildlife Disease and Migratory Species,</td>
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<tr>
<td>Res.12.6, preambular para 13</td>
<td>Aware of the issue of outbreaks of Highly Pathogenic Avian Influenza (HPAI) (subtype H5N1), which have had major impacts on livelihoods linked to the keeping of domesticated birds (mainly poultry) and on nature conservation values (including mortality of waterbirds on at least four internationally important Ramsar sites in Eurasia, and conscious of the increasing number of countries in which HPAI has been detected following its westward spread through Eurasia,</td>
<td>Aware that the spillover of the goose/Guangdong/1996 lineage of H5 highly pathogenic avian influenza virus (hereinafter HPAI virus) from the poultry sector has subsequently caused significant and concerning mortality in waterbirds, seabirds, raptors and avian scavengers as well as a number of mammal species on multiple continents and via spillback events, and has had major impacts on livelihoods and economies related to poultry production, and further concerned about</td>
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<td><strong>Res.12.6, preambular para 18</strong></td>
<td><strong>Noting</strong> that HPAI is considered to have been spread between countries by a number of different known vectors, including through the movement of avian livestock, cage birds and bird by-products, legal and illegal trade in birds, equipment associated with these respective industries, and movement of people, and noting that the migration of waterbirds has been suspected to be a vector as well, although direct evidence is lacking and aware that the relative significance of these different modes of spread has varied and evidence of causal links in many cases is weak or lacking.</td>
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<td><strong>Noting</strong> that HPAI is considered to have been the important role that wild birds now play in the spread of HPAI virus between countries, by a number of different known vectors, including but also recognizing that spread occurs through the movement of avian livestock, cage birds and bird by-products, legal and illegal trade in birds, and equipment associated with these respective industries, and movement of people, and noting that the migration of waterbirds has been suspected to be a vector as well, although direct evidence is lacking and aware that the relative significance of these different modes of spread has varied and evidence of causal links in many cases is weak or lacking.</td>
<td><strong>Noting</strong> the important role that wild birds now play in the spread of HPAI virus between countries, but also recognizing that spread occurs through the movement of avian livestock, cage birds and bird by-products, legal and illegal trade in birds, and equipment associated with these respective industries,</td>
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<td><strong>New text.</strong></td>
<td><strong>Further noting</strong> that the spread of HPAI virus in poultry-dense areas occurs mainly by movements of infected poultry or their products, contaminated equipment, and/or people wearing contaminated clothes or footwear, and further noting that reforms of the poultry sector are being recommended to reduce risks for poultry, such as improved biosecurity, reduction of size and density of poultry farms, avoidance of waterbird areas as a location for farms, and vaccination of poultry against HPAI virus.</td>
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<td><strong>New text.</strong></td>
<td>Aware that practices such as some high-risk markets, wild bird trade and grazing of domestic ducks in natural wetlands increase likelihood of viral transmission by creating extensive interfaces between domestic and</td>
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<td>Res.12.6, preambular para 14</td>
<td>Very conscious that, if the subtype of HPAI either genetically reassorts or adaptively mutates into a form transmissible between humans, this could have the global health, social and economic consequences of a human influenza pandemic,</td>
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<td>Very conscious of zoonotic infections caused by this virus in people occupationally or otherwise exposed to infected birds or mammals (wild or domesticated) and concerned that, if the subtype of HPAI either genetically reassorts or adaptively mutates into a form transmissible between humans, this could have the global health, social and economic consequences of a human influenza pandemic,</td>
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<td>Very conscious of zoonotic infections caused by this virus in people occupationally or otherwise exposed to infected birds or mammals (wild or domesticated) and concerned that, if the subtype of HPAI either genetically re-assorts or adaptively mutates into a form transmissible between humans, this could have the global health, social and economic consequences of a human influenza pandemic,</td>
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<tr>
<th>Res.12.6, preambular para 15</th>
<th>Mindful, however, that the limited number of known cases of human infection with the current strain of HPAI is restricted to certain parts of Asia and have been through contact with infected poultry and none through contact with wild birds, and recognizing that public attitudes and support for wetland and species (particularly waterbirds) conservation and sustainable use, could be negatively affected by concerns as to the possible role of waterbirds in the spread of HPAI (subtype H5N1),</th>
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<td>Mindful that while the limited number of known cases of human infection with the current strain of HPAI is restricted to certain parts of Asia and have been through contact with exposure to infected poultry and none through contact with wild birds, and recognizing that public attitudes and support for wetland and species (particularly waterbirds) conservation and sustainable use, could be negatively affected by concerns as to the possible role of waterbirds in the spread of HPAI (subtype H5N1), represents the greatest risk to human health, fear of risks from wild birds can negatively affect public attitudes and support for species conservation,</td>
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<tr>
<th>Res.12.6, preambular para 16</th>
<th>Concerned, however, that in most countries there is a significant lack of information and preparation and, in some cases, public misinformation on important issues related to the spread of HPAI, the risks it may pose, and how to anticipate and respond to outbreaks of HPAI, and noting in particular the difficulties that developing low-income countries face in assessing and responding to the threat of HPAI, especially given the significance in many of these countries of both domesticated and wild birds as the basis of rural livelihoods and food security,</th>
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<th>Res.12.6, preambular para 17</th>
<th>Concerned also that ill-informed prevention and responses may have unfortunate and possibly</th>
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<td>Concerned also that ill-informed prevention and responses may have unfortunate and possibly</td>
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Concerned also that ill-informed responses may have unfortunate and possibly disastrous long-term consequences for conservation, especially for some of the species which are globally threatened, and already have small or localized populations and particularly those species listed in Appendix I of the Convention and in Column A, Category 1 of Table 1 of the Action Plan of the Agreement on the Conservation of African Eurasian Migratory Waterbirds (AEWA),

disastrous—deleterious long-term consequences for conservation, especially for some of the species which are globally currently threatened, and/or already have small or localized populations and particularly those species listed in Appendix I of the Convention and in Column A, Category 1 of Table 1 of the Action Plan of the Agreement on the Conservation of African Eurasian Migratory Waterbirds (AEWA),

deleterious long-term consequences for conservation, especially for species that are currently threatened, and/or already have small or localized populations,

Res.12.6, preambular para 19

Aware of the continued major concerns and implications of the spread of highly pathogenic avian influenza (HPAI) subtype H5N1 of Asian lineage, as reflected, inter alia, by CMS Resolution 8.27, AEWA Resolutions 3.18 and 4.15, and Ramsar Resolutions IX.23 and X.21 and the guidance annexed to the latter resolution: guidance on responding to the continued spread of highly pathogenic avian influenza H5N1; and also aware that national and international responses to the spread of HPAI H5N1 might provide useful models for adoption in response to the challenges of other emerging and re-emerging diseases that affect wildlife

Res.12.6, para 4

4. Emphasizes that destruction or substantive modification of wetland and other habitats with the objective of reducing contact between domesticated and wild birds does not amount to wise use as urged by Article 3.1 of the Ramsar Convention and Articles 1 and 8 of the Convention on Biological Diversity, and may exacerbate the problem by causing further dispersion of infected birds;

Res.12.6, para 37

37. Encourages the Contracting Parties to utilize, as appropriate, in relation to issues for migratory species the guidance available in Ramsar Resolution X.21:

Aware of the continued major concerns and implications of the spread of highly pathogenic avian influenza (HPAI) subtype H5N1 of Asian lineage, as reflected, inter alia, by that inappropriate responses to HPAI in wild birds, such as lethal control and habitat destruction, are contrary to advice from FAO and the World Organization for Animal Health (WOAH) and the mandates of CMS Resolution 12.6, AEWA Resolutions 3.18 and 4.15, and Ramsar Resolutions IX.23 and X.21 (and its annexed guidance); recognizing that lethal measures to eliminate HPAI in wild bird populations are not feasible and may exacerbate the problem by causing further dispersion of infected birds; and further emphasizing that destruction or substantive modification of wetland and other habitats with the objective of reducing contact between domesticated and wild birds does not amount to wise use as urged by Article 3.1 of the Ramsar Convention on Wetlands and Articles 1 and 8 of the Convention on Biological Diversity, and may exacerbate the problem by causing further dispersion of infected birds,
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<tr>
<td><strong>Res.12.6, preambular para 21</strong></td>
<td>Welcoming the involvement of FAO, WOAH and WHO in this issue responses to HPAI, notably through their Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza and its implementation, inter alia, through regional Technical Cooperation Programmes on Emergency Assistance for Early Detection and Prevention of Avian Influenza,</td>
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<tr>
<td><strong>Welcoming</strong> the involvement in this issue of the Food and Agriculture Organization (FAO), the World Health Organization (WHO), and OIE, notably through the publication in May 2005 of a Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza and its implementation, inter alia, through regional Technical Cooperation Programmes on Emergency Assistance for Early Detection and Prevention of Avian Influenza,</td>
<td>Welcoming the involvement of FAO, WOAH and WHO in responses to HPAI, notably through their Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza and its implementation, inter alia, through regional Technical Cooperation Programmes on Emergency Assistance for Early Detection and Prevention of Avian Influenza,</td>
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<td><strong>Res.12.6, para 26</strong></td>
<td>Invites Parties to contribute voluntarily to the Wildlife Health Event Reporter (WHER) as an unofficial rapid reporting system for wildlife morbidity and mortality events in collaboration with OIE national delegates and wildlife focal points, taking fully into account the OIE WAHIS, FAO/OIE/WHO GLEWS mechanisms and existing regional information systems, and the need to complement existing communication channels, specifically OIE disease reporting and ProMed-mail;</td>
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<td>26. <strong>Invites</strong> Parties to contribute voluntarily to the Wildlife Health Event Reporter (WHER) as an unofficial rapid reporting system for wildlife morbidity and mortality events in collaboration with OIE national delegates and wildlife focal points, taking fully into account the OIE WAHIS, FAO/OIE/WHO GLEWS mechanisms and existing regional information systems, and the need to complement existing communication channels, specifically OIE disease reporting and ProMed-mail;</td>
<td>Welcoming also the WOAH World Animal Health Information System (WAHIS), the joint FAO-WOAH-WHO Global Early Warning System for health threats and emerging risks at the human-animal-ecosystems interface (GLEWS+), the WOAH-FAO network for expertise in animal influenza (OFFLU) and existing regional information systems, and the need to complement existing communication channels, specifically WOAH disease reporting and ProMed-mail,</td>
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<td><strong>Res.12.6, preambular para 38</strong></td>
<td>Recognizing the need for rapid and continued sharing of data and information given the potential significance of this information in terms of bird conservation and population dynamics, so as to enable or improve risk assessments and be better prepared to improve conservation of waterbirds and future management of</td>
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<td>Recognizing the need for and benefits of rapid and continued sharing of data and information across sectors, and the need for recording the impact of HPAI virus and other emerging pathogens on wildlife populations in order to better guide policies for future prevention and management of emerging infectious diseases, not only from human health and</td>
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avian disease outbreaks,

order to better guide policies for future prevention and management of avian emerging infectious disease outbreaks not only from human health and agricultural economy perspectives, but also from the nature conservation perspective.

Res.13.6, preambular para 32

Aware of the outcomes of the WHO/FAO/World Bank meeting in Geneva of 7-9 November 2005 on ‘Avian Influenza and human pandemic influenza’ which identified the significant gap of knowledge concerning the role that wild birds might play in the spread of HPAI, noting the need to strengthen research and monitoring related to waterbird migration and trade in birds, as well as disease processes in wild bird populations, especially research identified by the Scientific Task Force on Avian Influenza and Wild Birds (See Annex 1),

Aware of the outcomes of the WHO/FAO/World Bank meeting in Geneva of 7-9 November 2005 on ‘Avian Influenza and human pandemic influenza’ which identified the significant gap of knowledge concerning the role that wild birds might play in the spread of HPAI, Noting the need to strengthen research, and monitoring and surveillance related to species affected by HPAI to understand epidemiology and impacts of disease, as supported also by AEWA Resolutions 8.2, 8.7 and 8.15, as well as prevention, preparedness and management to conserve wild bird populations, waterbird migration and trade in birds, as well as disease processes in wild bird populations, especially research identified by the Scientific Task Force on Avian Influenza and Wild Birds (See Annex 1),

Noting the need to strengthen research, monitoring and surveillance related to species affected by HPAI to understand epidemiology and impacts of disease, as supported also by AEWA Resolutions 8.2, 8.7 and 8.15, as well as prevention, preparedness and management to conserve wild bird populations,

Res.12.6, preambular para 37

Thanking the CMS Secretariat and the FAO Animal Health Service for their coordination of the Scientific Task Force on Avian Influenza and Wild Birds documented in document Conf. 9.25; and also thanking Task Force members and observers for their valuable work in maintaining coordination with respect to policies and advocacy concerning the spread of HPAI H5N1,

Thanking the CMS Secretariat, and the FAO Animal Health Service and the coordinator and members and observers of for their coordination of the Scientific Task Force on Avian Influenza and Wild Birds documented in document Conf. 9.25; and also thanking Task Force members and observers for their valuable work in producing situation updates and guidance for those responding to HPAI in wildlife, recognizing that anticipation, prevention and preparedness are essential for responding to disease maintaining coordination with respect to policies and advocacy concerning the spread of HPAI H5N1,

Thanking the CMS Secretariat, the FAO Animal Health Service and the coordinator and members and observers of the Scientific Task Force on Avian Influenza and Wild Birds for their valuable work in producing situation updates and guidance for those responding to HPAI in wildlife, recognizing that anticipation, prevention and preparedness are essential for responding to disease,

Res.12.6, para 35

35. Congratulates and thanks the members of the Scientific Task Force on Avian Influenza and Wild Birds for their unstinting efforts and output during the period 2005–2008 which have made a significant contribution to improving understanding and awareness of the causes of, and responses to, the spread of HPAI H5N1;

[...]

<table>
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<tr>
<th>New text.</th>
<th>Calls on Parties to note the key messages, use the guidance and implement the recommendations from the 2023 statement of the CMS-FAO Co-Convened Scientific Task Force on Avian Influenza and Wild Birds, specifically relating to the need for:</th>
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<tr>
<td><strong>Res.12.6, para 9</strong></td>
<td>a) <strong>Underlines</strong> the importance of cross-sectoral, multi-stakeholder planning and preparedness, and the development and implementation of national wildlife contingency or action plans for HPAI to enable effective prevention, responses and minimization of losses related to the potential risk of disease transmission, and the need for national preparedness to respond effectively to instances of detection of HPAI in birds, notably in wetland-dependent species;</td>
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<td></td>
<td>b) an appreciation among environment sections of government of their responsibility for wildlife aspects of HPAI and enhancing coordination and collaboration with veterinary authorities;</td>
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<td>c) robust outbreak investigation following a One Health approach with virological and epidemiological analyses, and</td>
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<td>d) integrated population monitoring to measure impacts of the disease;</td>
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<td>2. <strong>Requests Parties to ensure that responses to HPAI in wildlife do not include lethal responses such as culling of wildlife, nor use of disinfectants or other measures in wild settings that may affect habitat quality, nor destruction or substantive modification of wetland and other habitats with the objective of</strong></td>
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<td><strong>Res.12.6, para 3 and para 4</strong></td>
<td><strong>Supports</strong> the conclusions of WHO, FAO and OIE that attempts to eliminate HPAI in wild bird populations through lethal responses such as culling are not feasible and may exacerbate the problem by causing further dispersion of infected birds;</td>
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</table>
feasible and may exacerbate the problem by causing further dispersion of infected birds;

4. **Emphasizes** that destruction or substantive modification of wetland and other habitats with the objective of reducing contact between domesticated and wild birds does not amount to wise use as urged by Article 3.1 of the Ramsar Convention and Articles 1 and 8 of the Convention on Biological Diversity, and may exacerbate the problem by causing further dispersion of infected birds;

<table>
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<td>8. New text.</td>
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<td>Res.12.6, para 8</td>
<td>Res.12.6, para 5</td>
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<td>8. Notes the overriding importance of enhanced biosecurity measures, including adequate farming and aquaculture standards, and the need for competent authorities to develop strategies that limit the risk of disease transmission between wild and domestic animals (through enhanced biosecurity measures) and humans;</td>
<td>5. Calls on Contracting Parties and urges non-contracting Parties to strictly apply internationally agreed quarantine and health standards for the cross-border transport of bird products and captive birds of all kinds and further calls for a crackdown on the illegal transport of bird products and captive birds of all kinds, both nationally and internationally;</td>
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<td>Further requests Parties to adopt measures to reduce the risk of transmission of avian influenza between wildlife and poultry by:</td>
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<td>a) preventing spillover of HPAI viruses from poultry to wildlife and reducing risks to both sectors by, inter alia, enhancing biosecurity measures, including implementing adequate farming and aquaculture standards, and the need for competent authorities to develop strategies that limit the risk of disease transmission between wild and domestic animals (through enhanced biosecurity measures) and humans;</td>
<td>b) further mitigating activities that are high risk in terms of viral transfer between livestock, wildlife and people by, inter alia, restricting the grazing of domestic ducks in natural wetlands, addressing risks associated with high-risk markets, and trade of wild birds, and</td>
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<td>c) strictly applying internationally agreed quarantine and health standards for the cross-border transport of birds and their products and captive birds of all kinds, and further calls for a crackdown on the prevention of the illegal transport of birds and their products and captive birds of all kinds, both nationally and internationally;</td>
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2. In response to the issue of HPAI H5N1, given its potential significance for conservation of migratory species, and the need to be better prepared for the future management of avian disease outbreaks, calls upon Contracting Parties, non-contracting Parties, international and national organizations, in cooperation with FAO, OIE and other competent authorities in domesticated and captive birds, to support and build capacity for research (see annex) related to disease processes in migratory bird species, long-term monitoring of their movements and populations and rapid development of surveillance programmes for HPAI in populations of wild birds; and to strengthen ongoing efforts to improve, integrate and analyze existing data sets across different flyways to determine precise migratory routes, fluxes and population dynamics of species, and to disseminate the results;

12. Urges the Contracting Parties to:
   a) support the establishment of an internationally or regionally coordinated well-structured long-term monitoring and surveillance programme for migratory birds, as appropriate, to assess, inter alia, current and new disease risks, making best use of, and building on existing schemes; and
   b) rapidly fill specific gaps in knowledge through provision of support to establish programmes to study migratory patterns of targeted species at flyway level (including bird-ringning/banding, colour-marking, satellite tracking and isotope study);

   Calls on Parties, non-Parties, and relevant international and national organizations to improve the understanding of and preparedness for avian influenza outbreaks, in particular by supporting and building capacity for:
   a) research into HPAI in wild birds and mammals,

4. Calls on Parties, non-Parties, relevant international and national organizations to improve the understanding of and preparedness for avian influenza outbreaks, in particular by supporting and building capacity for:
   a) research into HPAI in wild birds and mammals,
   b) long-term monitoring of migratory bird populations and movements, with focus on enhanced assessment for those species affected by HPAI,
   c) robust surveillance programmes with conservation objectives for HPAI in populations of wild birds while additionally preventing delays in diagnosis and research caused by regulatory limits on transporting specimens across national boundaries,
   d) integrating and analysing existing data sets across different flyways to determine precise migratory routes, fluxes and species’ population dynamics, and sharing data with other sectors to enhance multisectoral risk assessment,
   e) early warning systems,
   f) determination of impacts of HPAI outbreaks,
   g) international cooperation in surveillance and risk assessments across flyways, and
   h) improving rapid wildlife reporting systems with collaboration and information-sharing with WOAH national delegates and wildlife focal points, WOAH WAHIS, the joint FAO-WOAH-WHO GLEWS and existing regional information systems;
b) long-term monitoring of migratory bird populations and movements, with focus on enhanced assessment for those species affected by HPAI,
c) robust surveillance programmes with conservation objectives for HPAI in populations of wild birds while additionally preventing delays in diagnosis and research caused by regulatory limits on transporting specimens across national boundaries,
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f) determination of impacts of HPAI outbreaks;
g) international cooperation in surveillance and risk assessments across flyways, and
h) improving rapid wildlife reporting systems with collaboration and information-sharing with WOAH national delegates and wildlife focal points, WOAH WAHIS, the joint FAO-WOAH-WHO GLEWS and existing regional information systems;

Res.12.6, para 15

15. **Further urges** Parties and international donor organizations to support the activities of the Scientific Task Force on Wildlife and Ecosystem Health, through both financial and in-kind support, and in particular for the organization of annual meetings of the Task Force;

New text.

Further urges Parties to actively support the work of the CMS Flyways Working Group given its role in providing information relevant to disease issues;

Res.12.6, para 13

13. **Requests** the Executive Secretary to explore possibilities for establishing partnerships so as to support the development of long-term funding for monitoring schemes, including the International
Waterbird Census and its derived outputs, that are relevant to the Convention’s interests;

Res.12.6, para 14, 17, and 35,

14. **Requests** the Executive Secretary working with the Scientific Council and in cooperation with the Scientific Task Force on Avian Influenza and Wild Birds to approach urgently FAO, OIE and WHO in response to their call for further research into fully understanding the role of wild birds in spreading HPAI, and seek the necessary resources to perform this work;

17. **Requests** the Executive Secretary to ensure continued leadership of the Convention in the Scientific Task Force on Avian Influenza and Wild Birds, through appropriate representatives of the Scientific Council and the Secretariat, and urges the Scientific Council, with and through the Scientific Task Force on Avian Influenza and Wild Birds, to provide relevant input on practical measures to reduce the risk of disease transmission between wild, captive and domesticated birds, to those agencies developing contingency and wetland management plans related to HPAI;

35. […] and requests that the CMS Secretariat and FAO continue to act as co-convenors of the Scientific Task Force on Avian Influenza and Wild Birds with the engagement of the CMS Scientific Council, building on international activities already undertaken, and responding to new developments related to the spread of HPAI H5N1 and other subtypes as they occur;

Res.12.6, para 38

38. **Requests** the Secretariat to report progress on the implementation of this Resolution to each meeting of the Conference of the Parties; and

b) provide support for the Scientific Task Force on Avian Influenza and Wild Birds,

c) include information on implementation of this Resolution in the format of the National Reports and to report progress on the implementation of this Resolution to each meeting of the Conference of the Parties.
CLEAN TEXT OF THE PROPOSED NEW RESOLUTION

AVIAN INFLUENZA

Noting the significant work under CMS on avian influenza,

Recalling Resolution 12.6 Wildlife Disease and Migratory Species, and the resolutions on wildlife disease and avian influenza which were consolidated into it and repealed by COP12: Resolution 8.27 Migratory Species and Highly Pathogenic Avian Influenza, Resolution 9.8 Responding to the Challenge of Emerging and Re-emerging Diseases in Migratory Species, including Highly Pathogenic Avian Influenza H5N1, and Resolution 10.22 Wildlife Disease and Migratory Species,

Aware that the spillover of the goose/Guangdong/1996 lineage of H5 highly pathogenic avian influenza virus (hereinafter HPAI virus) from the poultry sector has subsequently caused significant and concerning mortality in waterbirds, seabirds, raptors and avian scavengers as well as a number of mammal species on multiple continents and via spillback events, and has had major impacts on livelihoods and economies related to poultry production, and further concerned about future spread to other populations of migratory and other species already under multiple pressures,

Noting the important role that wild birds now play in the spread of HPAI virus between countries, but also recognizing that spread occurs through the movement of avian livestock, cage birds and bird by-products, legal and illegal trade in birds, and equipment associated with these respective industries,

Further noting that the spread of HPAI virus in poultry-dense areas occurs mainly by movements of infected poultry or their products, contaminated equipment, and/or people wearing contaminated clothes or footwear, and further noting that reforms of the poultry sector are being recommended to reduce risks for poultry, such as improved biosecurity, reduction of size and density of poultry farms, avoidance of waterbird areas as a location for farms, and vaccination of poultry against HPAI virus,

Aware that practices such as some high-risk markets, wild bird trade and grazing of domestic ducks in natural wetlands increase likelihood of viral transmission by creating extensive interfaces between domestic and wild birds, with additional risks for onward spread of infection to people,

Very conscious of zoonotic infections caused by this virus in people occupationally or otherwise exposed to infected birds or mammals (wild or domesticated) and concerned that, if the subtype of HPAI either genetically re-assorts or adaptively mutates into a form transmissible between humans, this could have the global health, social and economic consequences of a human influenza pandemic,

Mindful that while exposure to infected poultry represents the greatest risk to human health, fear of risks from wild birds can negatively affect public attitudes and support for species conservation,

Concerned that in many countries there is a lack of information and preparation, and, in some cases, public misinformation on important issues related to the spread of HPAI, the risks it may pose, and how to anticipate and respond to outbreaks, and noting in particular the difficulties that low-income countries face in assessing and responding to the threat of HPAI, especially given the significance in many of these countries of both domesticated and wild birds as the basis of rural livelihoods and food security,
Concerned also that ill-informed prevention and responses may have unfortunate and possibly deleterious long-term consequences for conservation, especially for species that are currently threatened, and/or already have small or localized populations,

Aware that inappropriate responses to HPAI in wild birds, such as lethal control and habitat destruction, are contrary to advice from FAO and the World Organization for Animal Health (WOAH) and the mandates of CMS Resolution 12.6, AEWA Resolutions 3.18 and 4.15, and Ramsar Resolutions IX.23 and X.21 (and its annexed guidance); recognizing that lethal measures to eliminate HPAI in wild bird populations are not feasible and may exacerbate the problem by causing further dispersion of infected birds; and further emphasizing that destruction or substantive modification of wetland and other habitats with the objective of reducing contact between domesticated and wild birds does not amount to wise use as urged by Article 3.1 of the Ramsar Convention on Wetlands and Articles 1 and 8 of the Convention on Biological Diversity, and may exacerbate the problem by causing further dispersion of infected birds,

Welcoming the involvement of FAO, WOAH and WHO in responses to HPAI, notably through their Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza and its implementation, inter alia, through regional Technical Cooperation Programmes on Emergency Assistance for Early Detection and Prevention of Avian Influenza,

Welcoming also the WOAH World Animal Health Information System (WAHIS), the joint FAO–WOAH–WHO Global Early Warning System for health threats and emerging risks at the human–animal–ecosystems interface (GLEWS+), the WOAH-FAO network for expertise in animal influenza (OFFLU) and existing regional information systems, and the need to complement existing communication channels, specifically WOAH disease reporting and ProMed-mail,

Recognizing the need for and benefits of rapid and continued sharing of data and information across sectors, and the need for recording the impact of HPAI virus and other emerging pathogens on wildlife populations in order to better guide policies for future prevention and management of emerging infectious diseases, not only from human health and agricultural economy perspectives, but also from the nature conservation perspective,

Noting the need to strengthen research, monitoring and surveillance related to species affected by HPAI to understand epidemiology and impacts of disease, as supported also by AEWA Resolutions 8.2, 8.7 and 8.15, as well as prevention, preparedness and management to conserve wild bird populations,

Thanking the CMS Secretariat, the FAO Animal Health Service and the coordinator and members and observers of the Scientific Task Force on Avian Influenza and Wild Birds for their valuable work in producing situation updates and guidance for those responding to HPAI in wildlife, recognizing that anticipation, prevention and preparedness are essential for responding to disease,
The Conference of the Parties to the
Convention on the Conservation of Migratory Species of Wild Animals

1. **Calls on** Parties to note the key messages, use the guidance and implement the recommendations from the 2023 statement of the CMS-FAO Co-Convened Scientific Task Force on Avian Influenza and Wild Birds, specifically relating to the need for:
   a) cross-sectoral, multi-stakeholder planning and preparedness, and the development and implementation of national wildlife contingency plans for HPAI to enable effective prevention, responses and minimization of losses,
   b) an appreciation among environment sections of government of their responsibility for wildlife aspects of HPAI and enhancing coordination and collaboration with veterinary authorities,
   c) robust outbreak investigation following a One Health approach with virological and epidemiological analyses, and
   d) integrated population monitoring to measure impacts of the disease;

2. **Requests** Parties to ensure that responses to HPAI in wildlife do not include lethal responses such as culling of wildlife, nor use of disinfectants or other measures in wild settings that may affect habitat quality, nor destruction or substantive modification of wetland and other habitats with the objective of reducing contact between domesticated and wild birds;

3. **Further requests** Parties to adopt measures to reduce the risk of transmission of avian influenza between wildlife and poultry by:
   a) preventing spillover of HPAI viruses from poultry to wildlife and reducing risks to both sectors by, inter alia, enhancing biosecurity measures, implementing adequate farming and aquaculture standards, vaccinating domestic birds and better planning as well as reforming and reassessing intensive production where risks have been identified,
   b) further mitigating activities that are high risk in terms of viral transfer between livestock, wildlife and people by, inter alia, restricting the grazing of domestic ducks in natural wetlands, addressing risks associated with high-risk markets, and trade of wild birds, and
   c) strictly applying internationally agreed quarantine and health standards for the cross-border transport of birds and their products and measures for the prevention of the illegal transport of birds and their products, both nationally and internationally;

4. **Calls on** Parties, non-Parties, and relevant international and national organizations to improve the understanding of and preparedness for avian influenza outbreaks, in particular by supporting and building capacity for:
   a) research into HPAI in wild birds and mammals,
   b) long-term monitoring of migratory bird populations and movements, with focus on enhanced assessment for those species affected by HPAI,
   c) robust surveillance programmes with conservation objectives for HPAI in populations of wild birds while additionally preventing delays in diagnosis and research caused by regulatory limits on transporting specimens across national boundaries,
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g) international cooperation in surveillance and risk assessments across flyways, and
h) improving rapid wildlife reporting systems with collaboration and information-sharing with WOAH national delegates and wildlife focal points, WOAH WAHIS, the joint FAO–WOAH–WHO GLEWS and existing regional information systems;

5. **Urges** Parties and international donor organizations to support the activities of the Scientific Task Force on Avian Influenza and Wild Birds, through both financial and in-kind support, in particular for the funding of the implementation of Task Force recommendations;

6. **Further urges** Parties to actively support the work of the CMS Flyways Working Group given its role in providing information relevant to disease issues;

7. **Requests** the Secretariat to:
   a) explore possibilities for establishing partnerships so as to support the development of long-term funding for monitoring schemes, such as the International Waterbird Census and its derived outputs, that are relevant to the Convention's objectives,
   b) provide support for the Scientific Task Force on Avian Influenza and Wild Birds,
   c) include information on implementation of this Resolution in the format of the National Reports and to report progress on the implementation of this Resolution to each meeting of the Conference of the Parties.
ANNEX 4

DRAFT DECISIONS

WILDLIFE DISEASE

Directed to Parties

14.AA Parties are encouraged to:

   a) take note of the Migratory Species and Health Review and implement its key recommendations;

   b) engage with WHO in developing a new instrument on pandemic prevention, preparedness and response.

Directed to the Scientific Council

14.BB The Scientific Council is requested to:

   a) provide any recommendations on issues related to migratory species and health, as appropriate, to COP15, noting the establishment of the CMS Scientific Council Working Group on Migratory Species and Health (Terms of Reference are contained in the document UNEP/CMS/ScC-SC5/Outcome 11) and the Scientific Task Force on Avian Influenza and Wild Birds.

Directed to the Secretariat

14.CC The Secretariat is requested, subject to the availability of resources, to:

   a) engage with WHO in developing a new instrument on pandemic prevention, preparedness and response;

   b) organize an online meeting of the CMS Scientific Council Working Group on Migratory Species and Health and the Scientific Task Force on Avian Influenza and Wild Birds to set up their work programmes;

   c) provide support for implementation of the work programmes of the CMS Scientific Council Working Group on Migratory Species and Health and the Scientific Task Force on Avian Influenza and Wild Birds, including commissioning studies or organizing workshops, as appropriate.